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09/489,420 01/21/00 MACQUEEN

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IM22/0424

EXAMINER

BERMAN, S

ART UNIT

PAPER NUMBER

1711

DATE MAILED:

04/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/489,420

Applicant(s)

MACQUEEN ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 24-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claims 1-45 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-23, drawn to a coating mixture, classified in class 522, subclass 1+.
- II. Claims 24-40, drawn to a coated substrate, classified in class 428, subclass 323.
- III. Claims 41-45, drawn to a process for making a coating on a substrate, classified in class 427, subclass 331+.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful in ^{making} self-sustainable molded articles and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds

one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the composition can be used in making self-sustainable molded articles. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the composition can be cured on a separate mold, removed from the mold, and then applied to the substrate to form the article of invention II.

During a telephone conversation with David Owens on February 7, 2001 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-23. Affirmation of this election must be made by applicant in replying to this

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Office Action. Claims 24-45 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a nonelected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

This application has been transferred from examiner Christopher G. Paulraj in Art Unit 1762 to examiner Susan Berman in Art Unit 1711 in response to Applicant's election of the subject matter in claims 1-23.

Specification

The use of the trademarks has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what feature of the mixture set forth would provide a macroscopic texture. What kinds of radiation curable resin are "capable" of forming a macroscopic texture? What component(s) is/are present in the composition to provide a macroscopic texture? What kinds of radiation curable resin are suitable for use in the instantly claimed "coating mixture"?

It is suggested that "pre-cured coating mixture" be replaced with "radiation curable coating mixture" because "pre-cured" coating mixture conventionally means a mixture that has been partially or fully cured before coating.

In claim 4 it is not clear whether applicant intends to claim a Markush Group of "radiation curable resins" or to claim radiation curable compositions comprising a photoinitiator. Claim 4 recites a Markush Group of radiation curable resins and includes acylphosphine oxide in the Markush Group. Acylphosphine oxide is an initiator, not a radiation curable resin, as disclosed on page 7 of the instant specification.

Claims 7 and 17 fail to define the viscosity that would be an "effective" viscosity for forming a macroscopic texture.

In claim 8 it is not clear what the phrase "wherein said radiation curable resin...control agent form said pre-cured coating mixture" is intended to add to the recitation "coating mixture of claim 1 further comprising a rheological control agent".

In claim 15, it is not clear what kinds of polymers are encompassed by the phrase "natural polymer". What kinds of polymers are "natural polymers"?

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Claim 19 fails to define the particle size "effective" to form macroscopic texture. It is not clear whether "plurality of particles" means some amount of particles or different kinds of particles.

Claim 20 recites "coating mixture of claim 1 further comprising:". However, the radiation curable resin mixture and initiator recited in claim 1 are specified in the last three lines of claim 20 wherein the components of the resin and the kind of initiator are set forth. It is suggested that claim 20 should read "coating mixture of claim 1 wherein the radiation curable resin comprises a mixture of urethane acrylate,... ethoxylated trimethylolpropane triacrylate and the initiator is an acylphosphine oxide photoinitiator".

Claims 21-23 recite a "coated substrate of claim 19". However, there is no antecedent basis in claim 19 for a "coated substrate". Claim 19 recites a "coating mixture".

Claims 1, 2, 5, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. These claims are omnibus type claims. All known radiation curable compositions comprising an initiator and also comprising any kind of particles or rheological control agent would be expected to provide a macroscopic texture upon curing. All known radiation curable compositions comprising an initiator and cured in a manner that results in a texture would be expected to provide a macroscopic texture upon curing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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It is noted, with respect to the rejections set forth below, that claims 10-15 do not limit the rheological control agent recited in claim 9 to either inorganic particles, organic solids or mixtures thereof. The claims merely recite suitable inorganic particles or organic solids to be used if such were chosen.

Claims 1, 2, 5, 7-10, 15, 17, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Slosberg et al (3,267,187). See column 3, lines 4-7, column 6, lines 1-16, and the formulations in column 6.

Claims 1-10, 14, 16, 18, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by McDowell (4,169,167). See column 11, lines 1-41, and the examples.

Claims 1-10, 14, 16, 18, 21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller, Jr. et al (4,348,447). See column 1, lines 30-38, column 3, line 18, to column 4, line 59 and column 6, lines 32-53.

Claims 1-9 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Troue (4,421,784). See the Abstract, column 7, line 28, to column 8, line 27.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Courtoy et al (Re 33,069). Courtoy et al disclose a graining operation which would be expected to provide a textured surface. Compositions comprising a radiation initiator and acrylate functional monomers, including ethoxylated bisphenol A dimethacrylate, are taught.

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Claims 1-9, 19 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (5,763,048). Takahashi discloses a matte decorative sheet comprising a ionizing radiation cured protective layer that contains fine particles of an impact-resistant resin, such as polycarbonate, nylon or polypropylene. See column 4, lines 1-17, column 5, lines 9-19, column 6, lines 23-36, and the Examples.

Claims 1-17, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorzalski et al (5,585,415). Gorzalski et al teach coating compositions comprising a resin, an acylphosphine oxide photoinitiator, a pigment and an optional viscosity control agent. See "Base Composition A" and the Examples.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorzalski et al (5,585,415) in view of Gallouedec et al in the article "Enhancement of Mechanical and Optical Properties... Using Ultra-Fine Polyamide Powders".

Gorzalski et al teach radiation curable compositions containing inorganic pigments and organic solids, such as cellulose acetate butyrate and/or polyethylene wax.

Gallouedec et al teach that ultra-fine polyamide powders added to high solids waterborne polyurethane lacquers provide uniformly textured coatings. The particle size ranges from 5 to 60 microns. The article further teaches that the very tight particle size distribution of the polyamide powders ensures the uniformity and reproducibility of the textured effect. See "Formulations" and "Conclusion".

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It would have been obvious to one skilled in the art at the time of the invention to ultra-fine polyamide powders in the radiation curable compositions disclosed by Gorzalski et al in order to provide uniformly textured coatings, as taught by Gallouedec et al in analogous art.

Allowable Subject Matter

Claim 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art of record and otherwise known to the examiner does not teach or suggest the combination of specifically sized nylon particles, alumina particles having a particle size distribution from 27 to 56 nanometers, a prehydrolyzed silane coupling agent with the resin mixture and acylphosphine oxide photoinitiator set forth in claim 20.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Berman whose telephone number is (703) 308-0040.

The fax number for this group is (703) 872-9310 or, for submissions after Final Rejection, (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application should be directed to the Customer Service telephone number (703) 306-5665.

S B
4/16/01



Susan Berman
Primary Examiner
Art Unit 1711